

## PCT

REC'D 21 JUL 2004

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference BWO3623-FG	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/IT 02/00183	International filing date (day/month/year) 22.03.2002	Priority date (day/month/year) 22.03.2002
International Patent Classification (IPC) or both national classification and IPC A01K29/00		
Applicant C.R.F. SOCIETA CONSORTILE PER AZIONI et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.
- ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of 3 sheets.

## 3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand <sup>1</sup>  04.08.2003	Date of completion of this report  20.07.2004
Name and mailing address of the International preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer  Van Woensel, G  Telephone No. +49 89 2399-2089  

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/IT 02/00183**

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-10 as originally filed

**Claims, Numbers**

1-10 received on 23.04.2004 with letter of 20.04.2004

**Drawings, Sheets**

1/1 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/IT 02/00183

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-10
	No: Claims	
Inventive step (IS)	Yes: Claims	1-10
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-10
	No: Claims	

2. Citations and explanations

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/IT 02/00183

**Ad V**

1. Reference is made to the following document:  
D2: GB-A-2 350 263 (LEIGHTON BERNARD) 22 November 2000 (2000-11-22)
2. The subject-matter of claims 1 and 10 relates to a vocal connection system according to document D2, from which the present application differs in that there are second vocal recognition means connected to the processing means, and stimulatory generating means for stimulating the animal brain so as to induce the animal to take determined actions.  
None of the prior art documents discloses or suggests such a system or method. Therefore claims 1 and 10 meet the requirements of Art. 33(3) PCT.  
Claims 2-9 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.  
Claims 1-4 are considered to be industrially applicable (Art. 33(4) PCT).

CLAIMS

1. A vocal connection system between humans and animals, particularly domestic animals, characterised in that it comprises:

5       - a matrix of sensors (2) which is to be positioned on the animal, in particular on its head and/or its neck, for converting stimuli detected on the body of the animal into electric signals (4) which are indicative of a status of the animal, in terms of  
10 stimuli, feelings, events, actions or behaviours,

      - processing means (3) operatively associated to the matrix of sensors (2), including memory means (5) in which human vocal messages are recorded corresponding to various status of the animal,

15       - a loudspeaker (6) operatively connected to the processing means (3),

      said processing means (3) being provided for receiving the signals (4) coming from the sensors (2) and for activating said loudspeaker (6) in order to  
20 emit a vocal message selected in said memory means (5), depending upon the said signals (4) which are received.

2. System according to claim 1, characterised in that it further comprises:

      - vocal recognition means (8) able to send signals  
25 (10) to the processing means (3) which are representative of the contents of vocal messages (9) emitted by the human user (7), and

      - stimuli generating means (11) operatively associated to the body of the animal, in particular to  
30 its head and/or neck, which receive said signals (10) which are representative of the contents of vocal messages (9) emitted by the user (7) from the processing means (3) and send corresponding stimuli to the animal brain.

3. System according to claim 2, characterised in that said processing means (3) are programmed to provide an interactive self-learning method where the human and animal are at the same level, where in particular the user (7) can correct or confirm the vocal messages emitted by said loudspeaker (6), by his vocal messages (9).

4. System according to claim 1 or 2, characterised in that the matrix of sensors (2), the processing means (3), the loudspeaker (6), the vocal recognition means (8) and the stimuli generating means (11) are integrated in a collar (C).

5. System according to claim 2, characterised in that the vocal recognition means (8) are used as supplementary means in addition to said sensors (2) in order to improve the interpretation of the status of the animal as detected by said sensors (2).

6. System according to claim 2, characterised in that it is adapted to develop with the time a language proper of the animal, by means of an evolutive process, through the hearing by the animal of the vocalization which the animal generates in association with its reactions to the environment.

7. System according to claim 1, characterised in that sensors (2) are provided to detect stimuli of different origin coming from the animal.

8. System according to claim 7, characterised in that first electrodes are provided which are operative to detect the electric activity of the animal brain and second electrodes to detect the electric activity of muscles and/or nerves of the animal.

9. System according to claim 1, characterised in that at least first and second sensors (2) are positioned just below respective ears of the animal or in any case close to the occipital cortex of the

animal, and further sensors (2) are arranged around the neck of the animal.

10. System according to claim 1, characterised in that a neural network control system is implemented in  
5 said processing means (3).